

A METHOD AND APPARATUS FOR DIRECTORY-BASED COHERENCE  
WITH DISTRIBUTED DIRECTORY MANAGEMENT

5 ABSTRACT

The present invention provides for a type of parallel processing architecture in which a plurality of processors has access to a shared memory hierarchy level. A memory hierarchy level has a coherence directory and associated 10 directory data with a plurality of cachelines each associated with different data. Buffers are interconnected to processor memory and a plurality of processor elements, each element interconnected to different buffers. Cache lines are requested from memory, and the requests, 15 responses, and detections therein are available for particular access modes, therein providing additional coherence of the data. Processing of the directory data is performed by processing elements.